

ČESKÉ VYSOKÉ UČENÍ TECHNICKÉ V PRAZE
FAKULTA STAVEBNÍ



PŘEDMĚT
Diplomová práce
125DPM

VYUČUJÍCÍ
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JMÉNO STUDENTA
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SEMESTR
ZIMNÍ 2019

FORMÁT

MĚŘÍTKO

OBSAH:

DATUM

1.1.2020

SCHÉMA ZAPOJENÍ

Č. VÝKR.

D.1.5.c.08

Toshiba Design **AIRS** - Index

Diplomová práce

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Toshiba DesignAIRS - Project Notes

Diplomová práce

Notes: Equivalent length is calculated by coefficients:

□* 1,2: 1.NP, 2.NP, 3.NP, 4.NP and VZT JEDNOTKA

The user is responsible for ensuring that all data entered is correct,

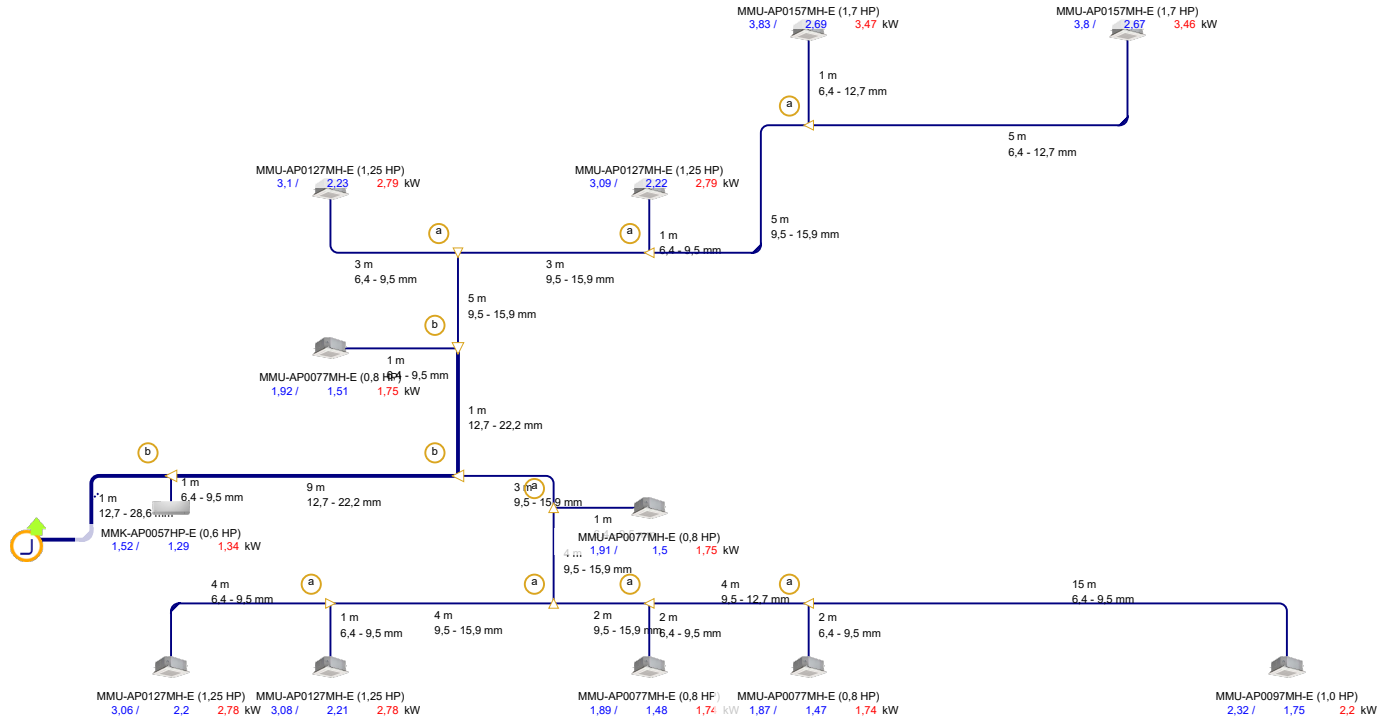
It is the responsibility of the consultant or contractor, to verify and confirm that the equipment selection and system design is correct before installation.

Please note that in the event of future system expansion being allowed for in the system design or a change in cooling/heating requirements, a re-evaluation of the air conditioning system must be made prior to final installation.

1.NP

Floor: 1.NP

Elevation: 7,5m below Outdoor Unit



System Information

Indoor Units	12 of 27
Capacity	110,0%
Total Pipe Length	88,5 m
Indoor Cap. Tot./Sen.	31,4 kW/23,2 kW
Indoor Cap. Heat.	28,59 kW
Building diversity	0%

Outdoor/Indoor Legend

Model Name (Capacity Code)
*Room name
Corrected Capacity _____ Tot./Sens./ Heat.

Piping Legend

Actual Length
Liquid / Suction Gas diameters
Note: It is the responsibility of the consultant or contractor, to verify and confirm that the equipment selection and system design is correct before installation.

Branches Legend

a RBM-BY55E (x8)
b RBM-BY105E (x3)

1.NP

Floor: 4.NP -STŘECHA

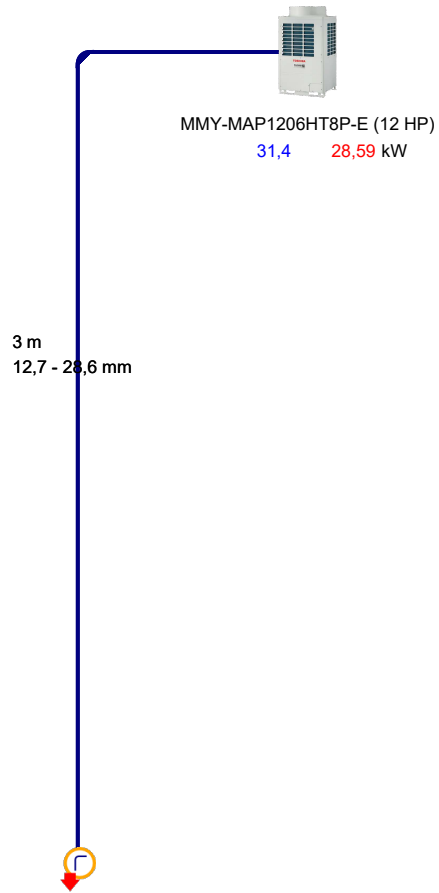
Elevation: 0m

System Information	
Indoor Units	12 of 27
Capacity	110,0%
Total Pipe Length	88,5 m
Indoor Cap. Tot./Sen.	31,4 kW/23,2 kW
Indoor Cap. Heat.	28,59 kW
Building diversity	0%

Outdoor/Indoor Legend	
Model Name (Capacity Code)	
*Room name	
Corrected Capacity	Tot./Sens./ Heat.

Piping Legend	
Actual Length	
Liquid / Suction Gas diameters	
Note: It is the responsibility of the consultant or contractor, to verify and confirm that the equipment selection and system design is correct before installation.	

Branches Legend	
a	RBM-BY55E (x8)
b	RBM-BY105E (x3)



1.NP

Control Wiring Legend	Label	Wiring Size and Length
Outdoor - Indoor Control Wiring*	U1/U2	1.5mm ² up to 1000m & 2.5mm ² up to 2000m
Central Control Wiring*	U3/U4	1.5mm ² up to 1000m & 2.5mm ² up to 2000m
Outdoor Units Control Wiring*	U5/U6	1.5mm ² to 2.5mm ² up to 100m
Remote Controller Wiring*	A/B	0.5mm ² to 2.5mm ² up to 500m (Wireless Remote Controller up to 400m). Group Control wiring is up to 200m

* 2 core, no polarity, shielded
Note: Power Wiring should comply with Local, National and International Regulation.

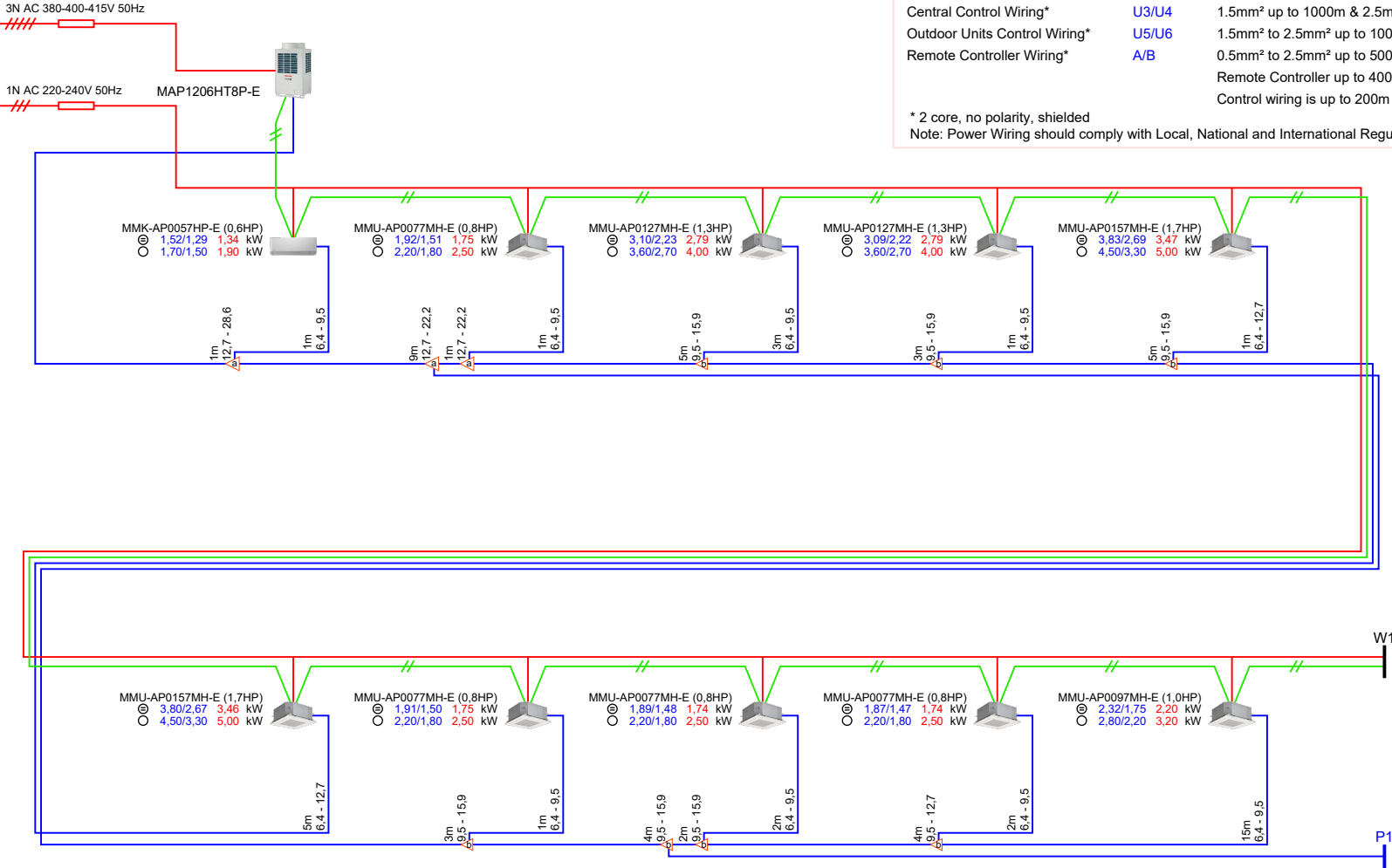
Symbol Legend

Control	
Power	
Remote Control	
Signal	
Rozvod chladiva*	

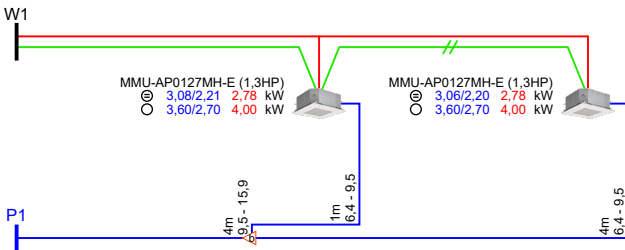
*Note: Pipe diameters in mm

Branches Legend

RBM-BY105E	a	(x3)
RBM-BY55E	b	(x8)



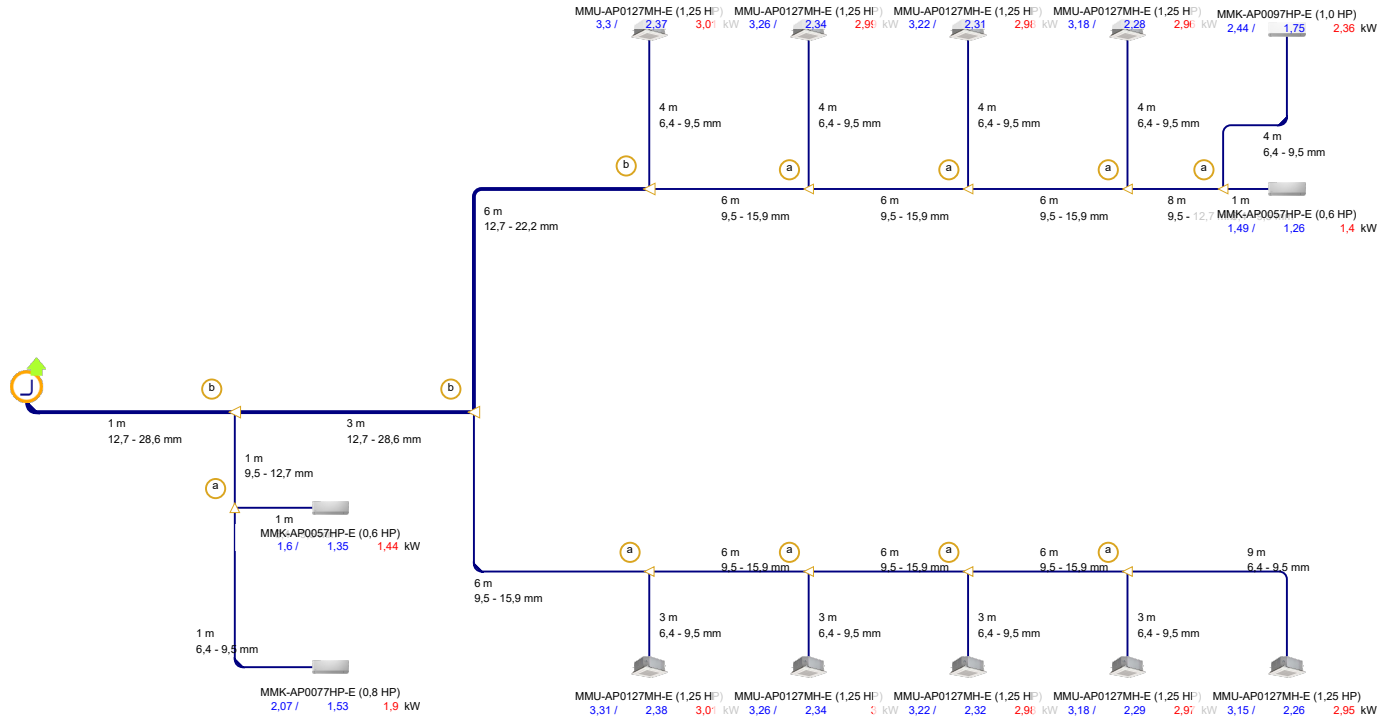
1.NP



2.NP

Floor: 2.NP

Elevation: 4m below Outdoor Unit



System Information

Indoor Units	13 of 31
Capacity	101,8%
Total Pipe Length	114 m
Indoor Cap. Tot./Sen.	36,67 kW/26,77 kW
Indoor Cap. Heat.	33,95 kW
Building diversity	0%

Outdoor/Indoor Legend

Model Name (Capacity Code)
*Room name
Corrected Capacity _____ Tot./Sens./ Heat.

Piping Legend

Actual Length
Liquid / Suction Gas diameters
Note: It is the responsibility of the consultant or contractor, to verify and confirm that the equipment selection and system design is correct before installation.

Branches Legend

a RBM-BY55E (x9)
b RBM-BY105E (x3)

2.NP

Floor: 4.NP -STŘECHA

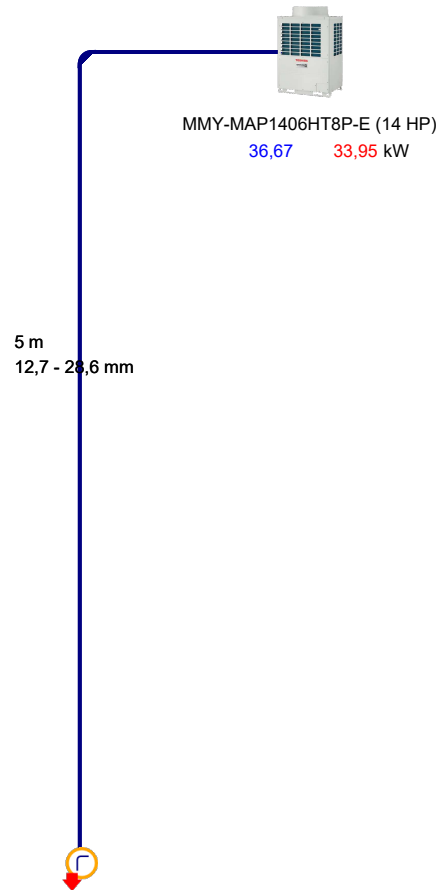
Elevation: 0m

System Information	
Indoor Units	13 of 31
Capacity	101,8%
Total Pipe Length	114 m
Indoor Cap. Tot./Sen.	36,67 kW/26,77 kW
Indoor Cap. Heat.	33,95 kW
Building diversity	0%

Outdoor/Indoor Legend	
Model Name (Capacity Code)	
*Room name	
Corrected Capacity	Tot./Sens./ Heat.

Piping Legend	
Actual Length	
Liquid / Suction Gas diameters	
Note: It is the responsibility of the consultant or contractor, to verify and confirm that the equipment selection and system design is correct before installation.	

Branches Legend	
a	RBM-BY55E (x9)
b	RBM-BY105E (x3)

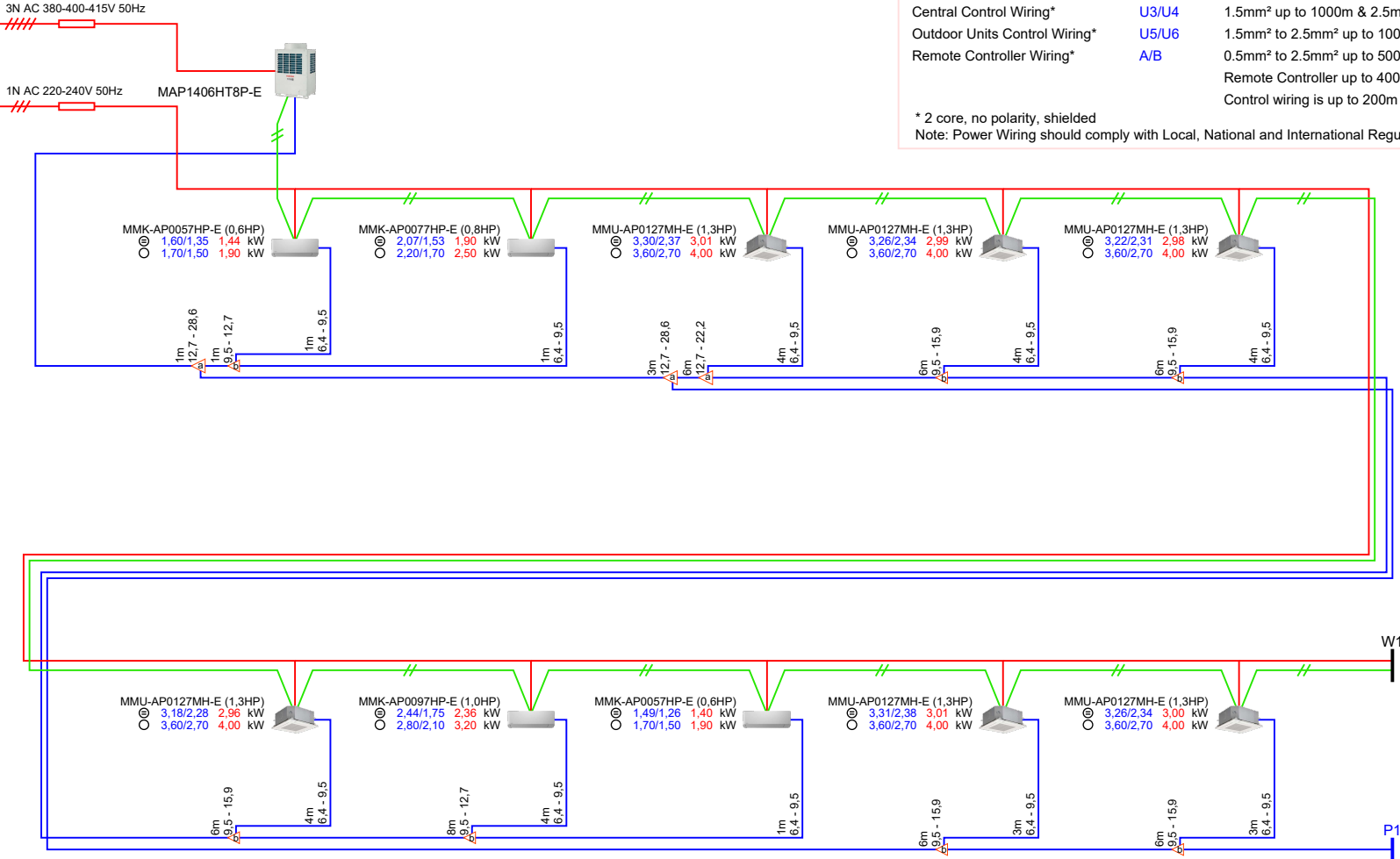


2.NP

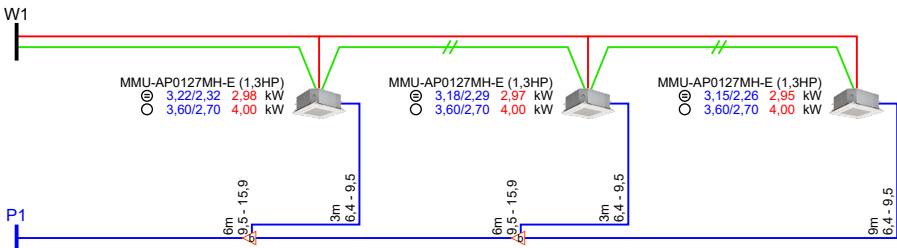
Control Wiring Legend	Label	Wiring Size and Length
Outdoor - Indoor Control Wiring*	U1/U2	1.5mm ² up to 1000m & 2.5mm ² up to 2000m
Central Control Wiring*	U3/U4	1.5mm ² up to 1000m & 2.5mm ² up to 2000m
Outdoor Units Control Wiring*	U5/U6	1.5mm ² to 2.5mm ² up to 100m
Remote Controller Wiring*	A/B	0.5mm ² to 2.5mm ² up to 500m (Wireless Remote Controller up to 400m). Group Control wiring is up to 200m

* 2 core, no polarity, shielded
Note: Power Wiring should comply with Local, National and International Regulation.

Symbol Legend	
Control	
Power	
Remote Control	
Signal	
Rozvod chladiva*	
*Note: Pipe diameters in mm	
Branches Legend	
RBM-BY105E	a (x3)
RBM-BY55E	b (x9)



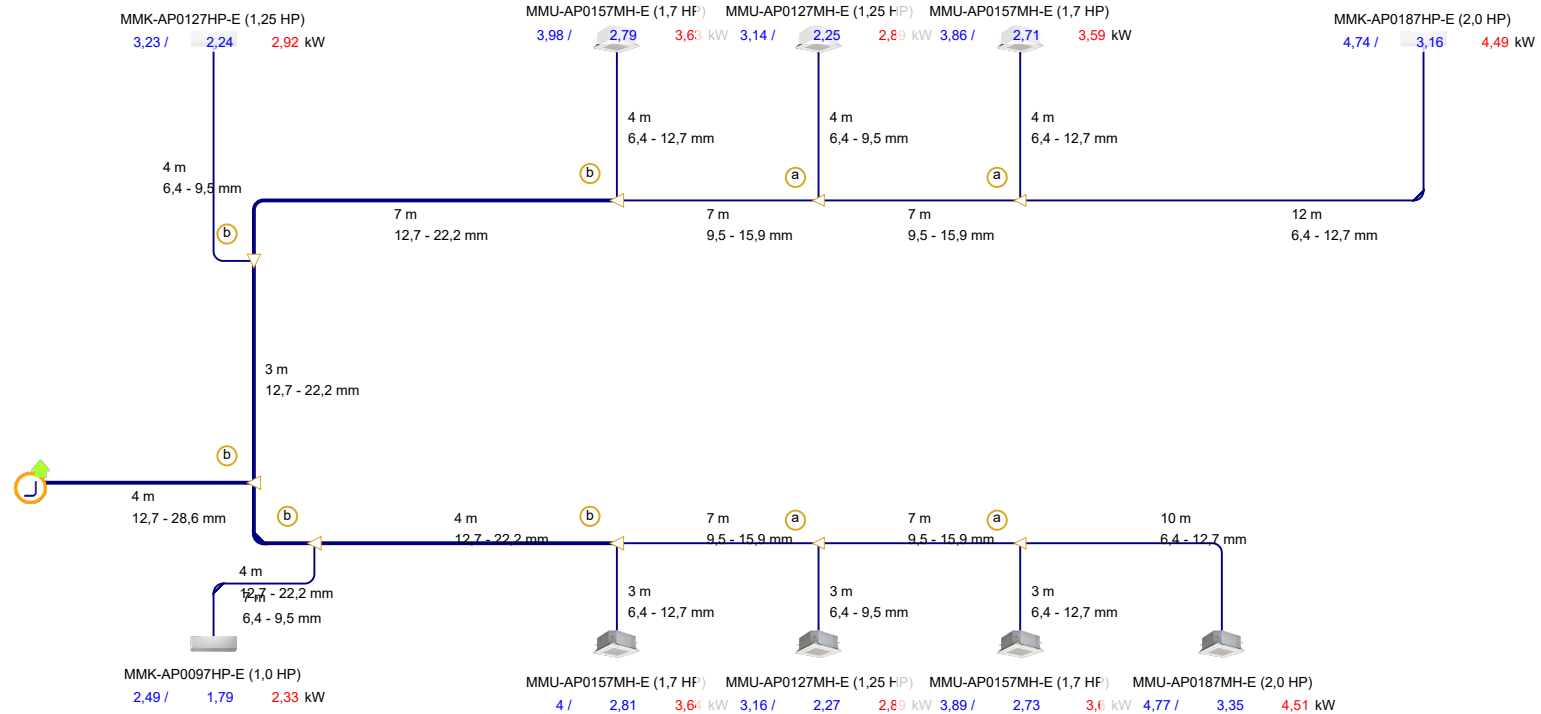
2.NP



3.NP

Floor: 3.NP

Elevation: 1m below Outdoor Unit



System Information

Indoor Units	10 of 31
Capacity	111,1%
Total Pipe Length	112 m
Indoor Cap. Tot./Sen.	37,26 kW/26,1 kW
Indoor Cap. Heat.	34,48 kW
Building diversity	0%

Outdoor/Indoor Legend

Model Name (Capacity Code)
*Room name
Corrected Capacity _____ Tot./Sens./ Heat.

Piping Legend

Actual Length
Liquid / Suction Gas diameters
Note: It is the responsibility of the consultant or contractor, to verify and confirm that the equipment selection and system design is correct before installation.

Branches Legend

a RBM-BY55E (x4)
b RBM-BY105E (x5)

3.NP

Floor: 4.NP -STŘECHA

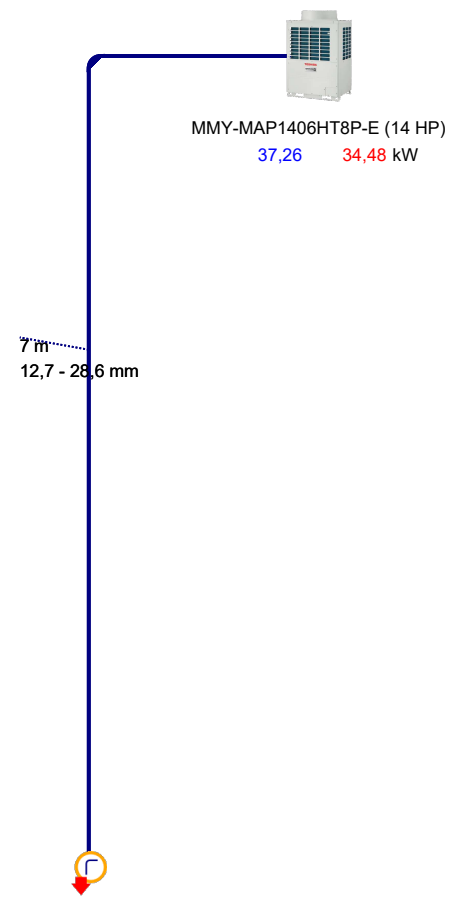
Elevation: 0m

System Information	
Indoor Units	10 of 31
Capacity	111,1%
Total Pipe Length	112 m
Indoor Cap. Tot./Sen.	37,26 kW/26,1 kW
Indoor Cap. Heat.	34,48 kW
Building diversity	0%

Outdoor/Indoor Legend	
Model Name (Capacity Code)	
*Room name	
Corrected Capacity	Tot./Sens./ Heat.

Piping Legend	
Actual Length	
Liquid / Suction Gas diameters	
Note: It is the responsibility of the consultant or contractor, to verify and confirm that the equipment selection and system design is correct before installation.	

Branches Legend	
a	RBM-BY55E (x4)
b	RBM-BY105E (x5)



3.NP

Control Wiring Legend	Label	Wiring Size and Length
Outdoor - Indoor Control Wiring*	U1/U2	1.5mm ² up to 1000m & 2.5mm ² up to 2000m
Central Control Wiring*	U3/U4	1.5mm ² up to 1000m & 2.5mm ² up to 2000m
Outdoor Units Control Wiring*	U5/U6	1.5mm ² to 2.5mm ² up to 100m
Remote Controller Wiring*	A/B	0.5mm ² to 2.5mm ² up to 500m (Wireless Remote Controller up to 400m). Group Control wiring is up to 200m

* 2 core, no polarity, shielded
Note: Power Wiring should comply with Local, National and International Regulation.

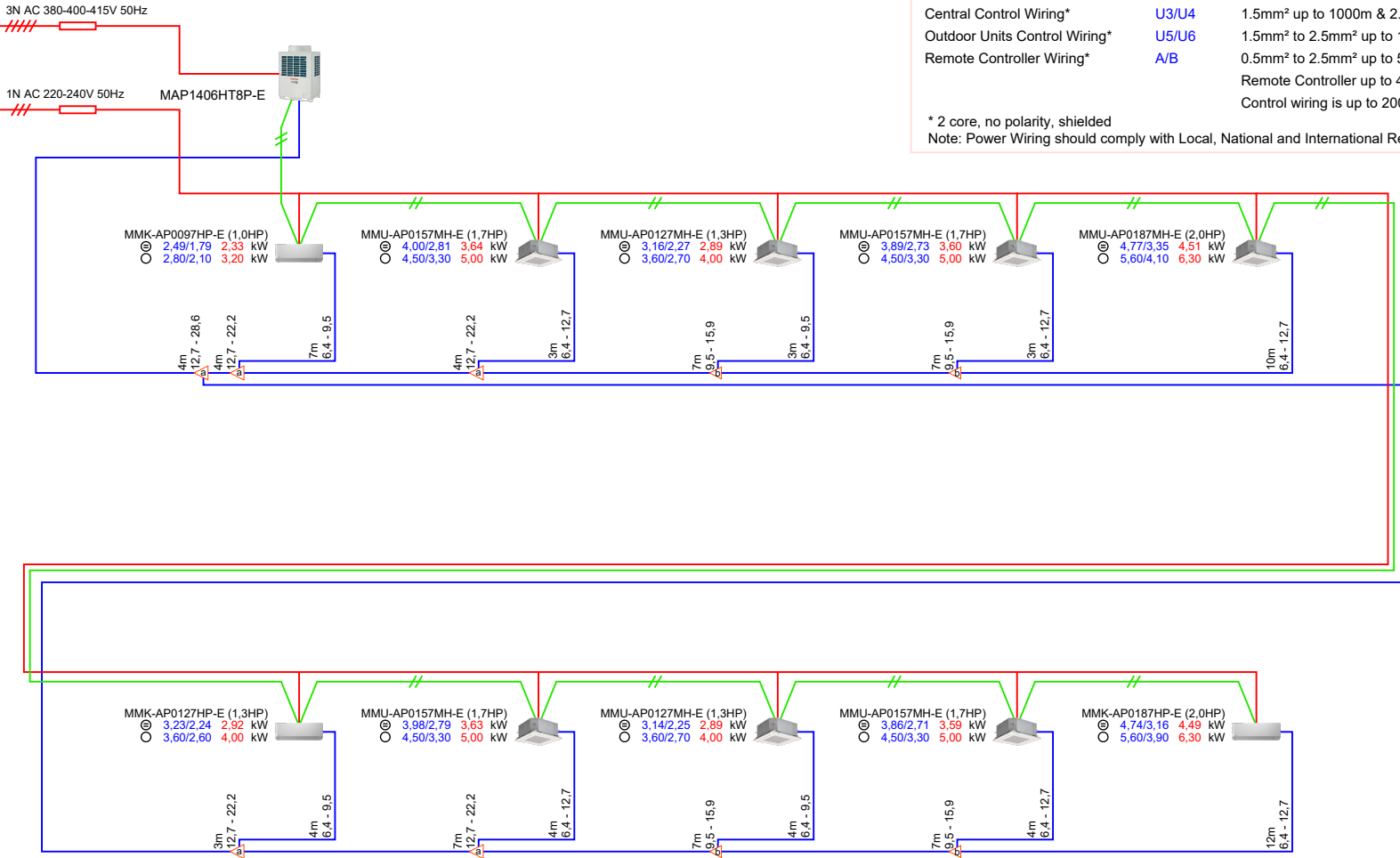
Symbol Legend

Control	
Power	
Remote Control	
Signal	
Rozvod chladiva*	

*Note: Pipe diameters in mm

Branches Legend

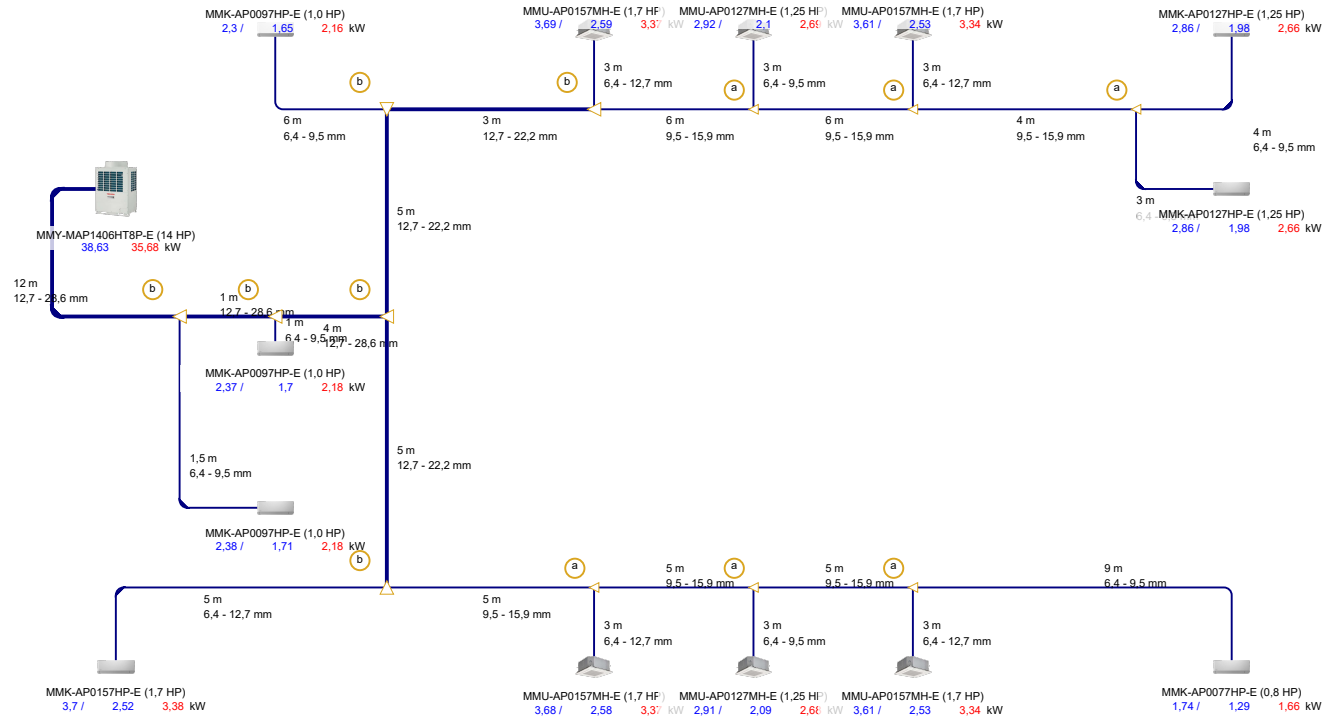
RBM-BY105E	a	(x5)
RBM-BY55E	b	(x4)



4.NP

Floor: 4.NP

Elevation: 0m



System Information

Indoor Units	13 of 31
Capacity	123,6%
Total Pipe Length	108,5 m
Indoor Cap. Tot./Sen.	38,63 kW/27,26 kW
Indoor Cap. Heat.	35,68 kW
Building diversity	0%

Outdoor/Indoor Legend

Model Name (Capacity Code)
*Room name
Corrected Capacity _____ Tot./Sens./ Heat.

Piping Legend

Actual Length
Liquid / Suction Gas diameters
Note: It is the responsibility of the consultant or contractor, to verify and confirm that the equipment selection and system design is correct before installation.

Branches Legend

a	RBM-BY55E	(x6)
b	RBM-BY105E	(x6)

4.NP

Control Wiring Legend	Label	Wiring Size and Length
Outdoor - Indoor Control Wiring*	U1/U2	1.5mm ² up to 1000m & 2.5mm ² up to 2000m
Central Control Wiring*	U3/U4	1.5mm ² up to 1000m & 2.5mm ² up to 2000m
Outdoor Units Control Wiring*	U5/U6	1.5mm ² to 2.5mm ² up to 100m
Remote Controller Wiring*	A/B	0.5mm ² to 2.5mm ² up to 500m (Wireless Remote Controller up to 400m). Group Control wiring is up to 200m

* 2 core, no polarity, shielded
Note: Power Wiring should comply with Local, National and International Regulation.

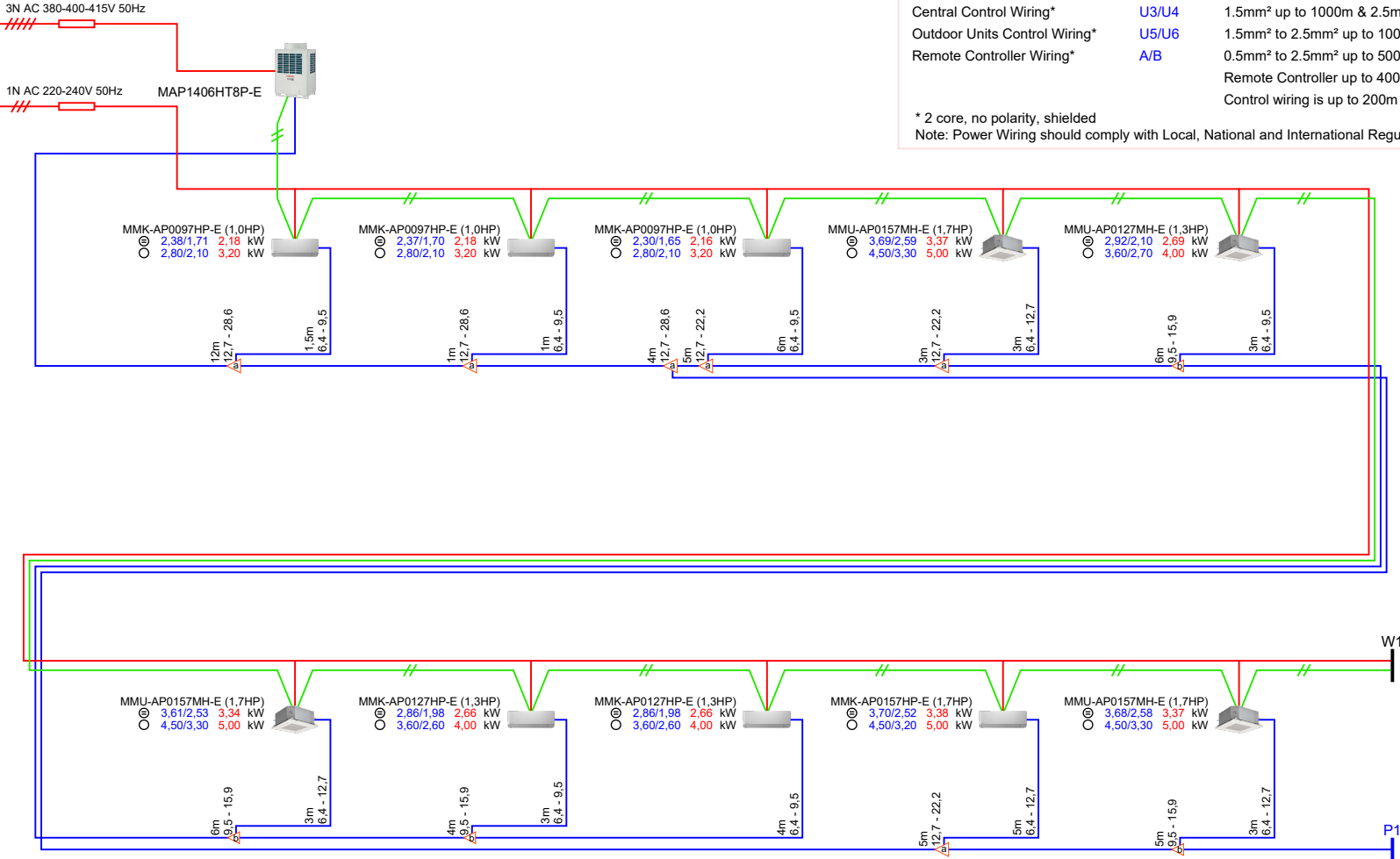
Symbol Legend

Control	
Power	
Remote Control	
Signal	
Rozvod chladiva*	

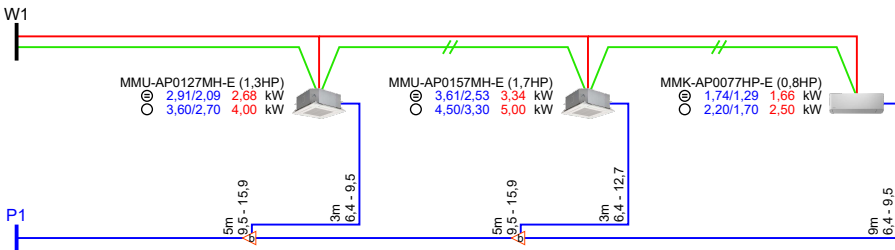
*Note: Pipe diameters in mm

Branches Legend

RBM-BY105E	a	(x6)
RBM-BY55E	b	(x6)



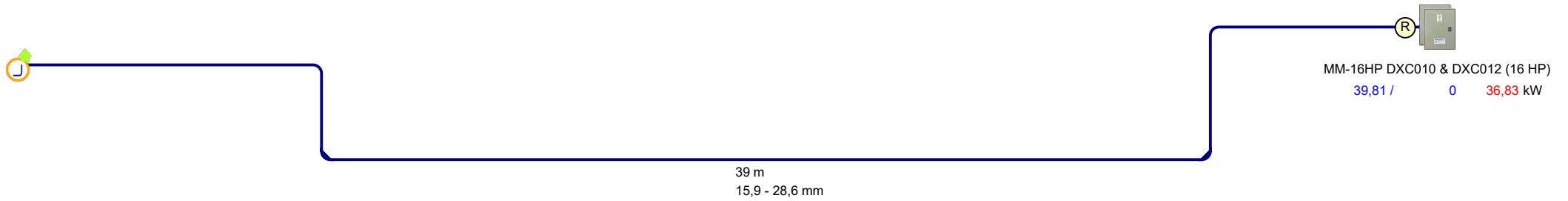
4.NP



VZT JEDNOTKA

Floor: 1.PP

Elevation: 11m below Outdoor Unit



System Information

Indoor Units	1 of 36
Capacity	100,0%
Total Pipe Length	57 m
Indoor Cap. Tot./Sen.	39,81 kW/0 kW
Indoor Cap. Heat.	36,83 kW
Building diversity	0%

Outdoor/Indoor Legend

Model Name (Capacity Code)
*Room name
Corrected Capacity _____ Tot./Sens./ Heat. _____

Piping Legend

Actual Length
Liquid / Suction Gas diameters
Note: It is the responsibility of the consultant or contractor, to verify and confirm that the equipment selection and system design is correct before installation.

Branches Legend

VZT JEDNOTKA

Floor: 4.NP

Elevation: 0m

System Information

Indoor Units	1 of 36
Capacity	100,0%
Total Pipe Length	57 m
Indoor Cap. Tot./Sen.	39,81 kW/0 kW
Indoor Cap. Heat.	36,83 kW
Building diversity	0%

Outdoor/Indoor Legend

Model Name (Capacity Code)

*Room name

Corrected Capacity _____ Tot./Sens./ Heat.

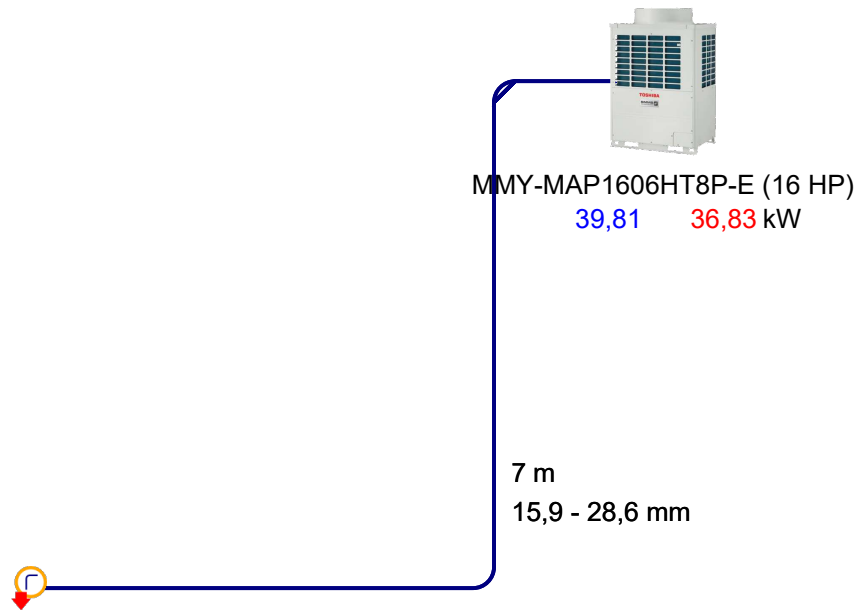
Piping Legend

Actual Length

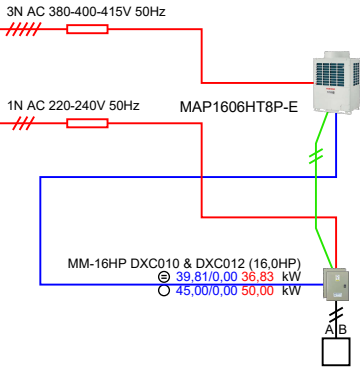
Liquid / Suction Gas diameters

Note: It is the responsibility of the consultant or contractor, to verify and confirm that the equipment selection and system design is correct before installation.

Branches Legend



VZT JEDNOTKA



Control Wiring Legend	Label	Wiring Size and Length
Outdoor - Indoor Control Wiring*	U1/U2	1.5mm ² up to 1000m & 2.5mm ² up to 2000m
Central Control Wiring*	U3/U4	1.5mm ² up to 1000m & 2.5mm ² up to 2000m
Outdoor Units Control Wiring*	U5/U6	1.5mm ² to 2.5mm ² up to 100m
Remote Controller Wiring*	A/B	0.5mm ² to 2.5mm ² up to 500m (Wireless Remote Controller up to 400m). Group Control wiring is up to 200m

* 2 core, no polarity, shielded
Note: Power Wiring should comply with Local, National and International Regulation.

Symbol Legend	
Control	
Power	
Remote Control	
Signal	
Rozvod chladiva*	
*Note: Pipe diameters in mm	
Branches Legend	
RBM-BY205E	a (x1)

06.01 CHLAZENÍ SERVER 3.NP

